



## INSTALLATION

by Schneider Electric

# EH8106L Legacy® Pressurized Enclosure®



C1420M-I (6/09)

# Contents

---

Important Safety Instructions .....	3
Description .....	4
Parts List .....	4
Accessories .....	4
Installation .....	5
Camera and Lens .....	5
Pressurizing the Enclosure .....	7
Mounting .....	7
Power Connection .....	7
Servicing .....	8
Disassembly .....	8
Recharging and Reassembly .....	8
Specifications .....	9

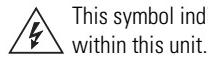
# Important Safety Instructions

---

Prior to installation and use of this product, the following WARNINGS should be observed.

1. Installation and servicing should be done only by qualified service personnel and conform to all local codes.
2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6, or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.
3. Only use replacement parts recommended by Pelco.
4. After replacement/repair of this unit's electrical components, conduct a resistance measurement between line and exposed parts to verify the exposed parts have not been connected to line circuitry.
5. The installation method and materials should be capable of supporting four times the weight of the enclosure, pan and tilt, camera and lens combination.

The product and/or manual may bear the following marks:



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

<b>CAUTION:</b>
RISK OF ELECTRIC SHOCK. DO NOT OPEN.

Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.

# Description

---

The EH8106L is a sealed and pressurized camera enclosure designed for use with PT780 Series Legacy® pan/tilts. This enclosure has lens preset capabilities and is designed for cameras with fixed focal length or motorized lenses. Two 40-watt heaters are also standard with the enclosure. The heaters are thermostatically controlled to turn on at 40°F (4°C) and turn off at 60°F (16°C).

The EH8106L makes use of the Legacy Series system of integral security industry components. Legacy components make the installation of the pan/tilt and enclosure fast and easy. The RediLINK® connector is a feature that attaches the enclosure mechanically and electrically to the pan/tilt in one easy step.

## PARTS LIST

### **QTY Description**

- 1 EH8106L pressurized enclosure
- 2 Allen head cap screws, 10-32 x 1-inch
- 1 Tube of Loctite® (thread locker)
- 1 Allen wrench
- 1 Desiccant bag
- 1 EH8106L Installation manual

## ACCESSORIES

EH8000RKIT	Dry nitrogen recharging kit for the EH8100 Series. The kit includes a pressure regulator and nitrogen.
PSKIT8100	Pressure sensor kit with contact closure that can be wired to trigger an alarm if the enclosure's internal pressure falls below 5 psi.
EH8006ORKIT	O-ring kit containing an O-ring, Loctite lubricant, and desiccant bag.

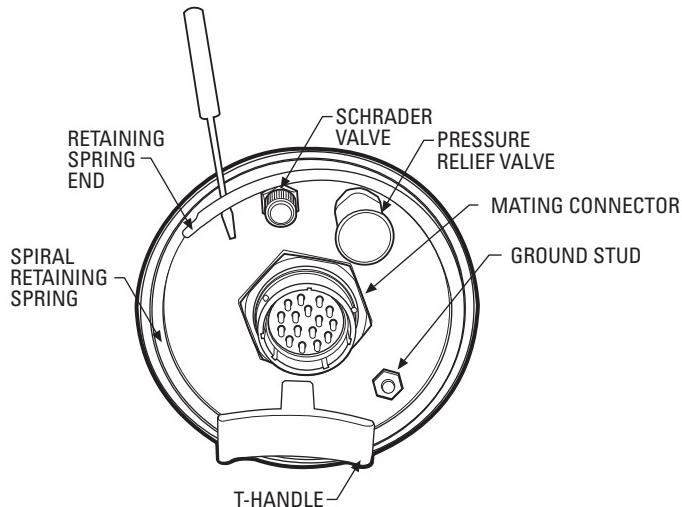
# Installation

---

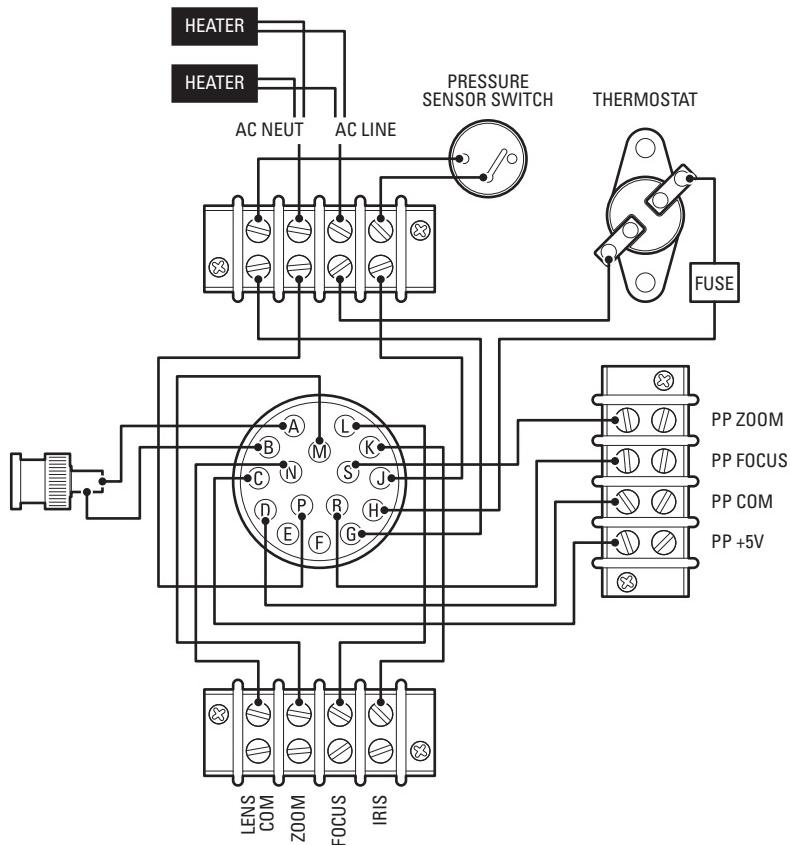
## CAMERA AND LENS

To install the camera and lens:

1. Remove the rear plate of the enclosure (refer to Figure 1):
  - a. Remove the center cap from the Schrader valve.
  - b. Press and hold the center stem of the Schrader valve to relieve internal enclosure pressure.
  - c. Remove the spiral retaining ring from the back of the enclosure. Use a screwdriver to pry the end of the spiral retaining ring from the retaining ring groove.
  - d. Pull the T-handle to remove the rear plate from the housing.
2. Slide the sled out of the enclosure.
3. Remove the desiccant bag from the camera sled. Do not discard the bag.
4. Mount the camera and lens onto the sled:
  - a. Extend the lens to the maximum length before positioning the camera and lens.
  - b. Position the camera and lens so they do not extend beyond the track.
  - c. Fasten the camera and lens to the sled; the fastener is not supplied. (The most common fastener is a 1/4-inch x 20 screw, depending on the camera type.)
5. Connect the wiring for camera power, lens functions, and video (refer to Figure 2 on page 6).
6. Unwrap and install the desiccant bag inside the enclosure.
7. Reinstall the camera sled by sliding it back into the enclosure body. Secure the unit with the spiral retaining ring.
8. Pressurize the inside of the enclosure (refer to *Pressurizing the Enclosure* on page 7).



**Figure 1.** Rear View



**Figure 2.** Wiring Diagram

**Table A.** Pin Numbers and Descriptions

PIN NO.	FUNCTION	COLOR
A	VIDEO	COAX CORE
B	VIDEO	COAX SHIELD
C	PP +5V	BLK/WHT
D	PP COM	RED/WHT
E	CAMERA AC LINE	BLU
F	CAMERA AC NEUT	VIO
G	PS SWITCH	GRN/WHT
H	AC LINE	BLK
J	PS SWITCH	WHT/GRN
K	ZOOM	BRN
L	IRIS	RED
M	ZOOM	ORG
N	LENS	COM YEL
P	AC NEUT	WHT
R	PP FOCUS	YEL/WHT
S	PP ZOOM	GRY/WHT

## PRESSURIZING THE ENCLOSURE

You may use your own charging equipment or Pelco's EH8000RKIT to pressurize the enclosure. If you are using your own equipment, adjust the regulator for an output pressure of 12 psi (83 kPa). If you are using the EH8000RKIT, it uses a regulator with a fixed, nonadjustable output pressure of 12 psi (83 kPa). The gauge reads the tank pressure only.

**NOTE:** Be sure to use care when transporting the pressurized enclosure.

To pressurize the inside of the enclosure with nitrogen (refer to Figure 1 on page 5):

1. Open the charging kit's tank valve.
2. Remove the cap from the enclosure's Schrader valve, and then attach the air chuck from the charging equipment to the valve.
3. To reduce the purge time necessary to remove air from the enclosure, position the enclosure so that the window is pointing up.
4. Remove the plastic cap on the pressure relief valve on the rear of the enclosure.
5. Use a small screwdriver to hold the valve open.
6. Allow the nitrogen to flow through the enclosure until the humidity indicator registers the lowest humidity level, changing color from pink to blue. (The humidity indicator can be viewed through the front window of the enclosure by looking at the inside top of the enclosure.)
7. When the humidity indicator registers the lowest level, remove the screwdriver. Allow nitrogen to continue to flow into the enclosure until you no longer hear the flow of nitrogen from the tank to the enclosure.
8. Remove the charging equipment air chuck from the Schrader valve.
9. Replace the Schrader valve and pressure relief valve caps.

## MOUNTING

To attach the enclosure to the pan/tilt unit:

1. Make sure the tilt shaft on the pan/tilt unit is near horizontal so that the connector in the tilt shaft is pointing upward.
2. Lift the housing over the pan/tilt unit, and align the connector in the bottom of the enclosure with the connector in the top of the pan/tilt.
3. Place the enclosure down onto the pan/tilt. Move the enclosure side to side and back and forth as required to mate the two connectors. Once the two units are mated, apply firm pressure downward and to the back of the enclosure to fully seat the enclosure to the pan/tilt.
4. Balance the enclosure on the pan/tilt. Tighten the two screws in the back of the RediLINK clamp on the top of the PTZ with a 3/32-inch Allen wrench.

## POWER CONNECTION

1. Connect the ground wire to the ground stud on the back of the enclosure.
2. Connect the mating connector to the rear of the enclosure (refer to Figure 1 on page 5).

# Servicing

---

At a minimum, the enclosure should be recharged once a year. Also, you must recharge the enclosure anytime it is opened for servicing.

## DISASSEMBLY

 **WARNING:** Pressure must be released prior to opening the enclosure or personal injury may result.

1. Disconnect the power from the enclosure system..
2. Remove the mating connector from the rear of the enclosure by turning the outer ring counterclockwise until you feel a click; then remove the mating portion of the connector. You may elect to remove the enclosure from its mount, which will make the disassembly process much easier.
3. Remove the center cap from the Schrader valve (refer to Figure 1 on page 5).
4. Press and hold the center stem of the Schrader valve to relieve internal enclosure pressure.

## RECHARGING AND REASSEMBLY

When the enclosure is disassembled for servicing, it should be recharged after reassembly and prior to installation. Recharging requires the use of a Pelco EH8000RKIT recharge kit (or equivalent) and a Pelco EH8006ORKIT.

To prepare the enclosure for recharging:

1. Once the enclosure has been disassembled, remove the O-ring from the rear plate and install a new O-ring in the O-ring groove in the rear plate.
2. When the new O-ring has been installed in the rear plate, apply a liberal amount of the Loctite lubricant to the exterior surface of the O-ring and rear plate. Replace the desiccant bag in the enclosure with a new one. The Loctite lubricant and desiccant bag are supplied with the O-ring kit.
3. Slide the camera sled back into the body making sure the front lip of the sled is under the retaining bracket of the enclosure. When fully installed, the rear plate will fit firmly into the rear opening of the housing and the retaining groove will be fully visible.
4. Reinstall the spiral retaining ring in the retaining groove in the rear of the enclosure. (Refer to Figure 1 on page 5.)
5. Recharge the enclosure (refer to *Pressurizing the Enclosure* on page 7).

# Specifications

---

## ELECTRICAL

Input Voltage	120 VAC (230 VAC optional) for heaters
Power Requirements	80 W
Connector	16-pin jam nut receptacle
Maximum Cable Distances	
<b>120 VAC</b>	
16 AWG (1.5 mm <sup>2</sup> )	2,238 ft (682 m)
18 AWG (1.0 mm <sup>2</sup> )	1,410 ft (430 m)
20 AWG (0.5 mm <sup>2</sup> )	1,040 ft (316 m)

### 230 VAC

16 AWG (1.5 mm <sup>2</sup> )	8,224 ft (2,507 m)
18 AWG (1.0 mm <sup>2</sup> )	5,182 ft (1,579 m)
20 AWG (0.5 mm <sup>2</sup> )	3,257 ft (993 m)

Heater                    2 at 40 W, 120 VAC

**NOTE:** Heaters are thermostatically controlled to turn on at 40°F (4°C) and turn off at 60°F (16°C)

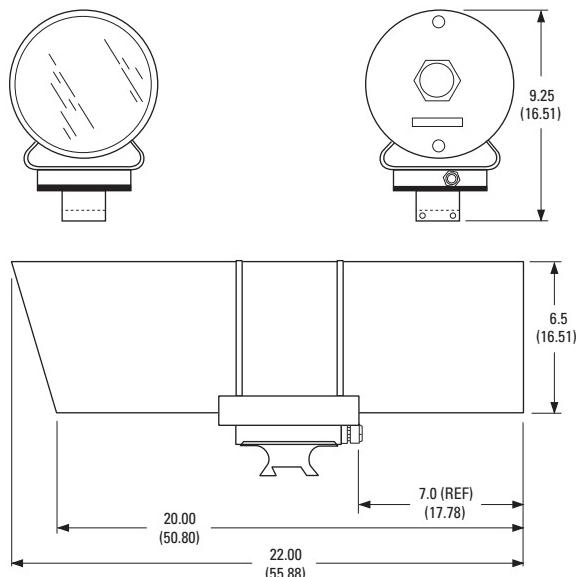
## GENERAL

Construction	Aluminum 6061 T6
Finish	
Outside	Gray polyester powder coat
Inside	Black anodized
Front Window	6-inch diameter tempered glass, 0.225-inch thick
Camera Mounting	Multiple mounting holes on camera sled allow for linear adjustment
Maximum Camera/Lens Size	5.0" D x 18.0" L (13 x 46 cm) or 18.0" L x 4.0" W x 4.0" H (46 x 10 x 10 cm)
Enclosure Mounting	RediLINK 26-pin connector mates enclosure to pan/tilt
Purge Fitting	Standard Schrader valve to allow enclosure to be filled with dry nitrogen
Purge Relief Fitting	Prevents overpressurization of enclosure
Weight	17.2 lb (7.8 kg)
Ratings	Meets NEMA Type 6 and IP 67 standards

## ENVIRONMENTAL

Ambient Operating Temperature	-40° to 122°F (-40° to 50°C), with heater
Vibration	5 to 60 Hz with 0.082-inch total travel (15 g at 60 Hz); from 60 to 1,000 Hz; 5 g RMS with random vibration
Altitude	Sea level to equivalent of 10,000 ft (3,048 m)
Acoustic Noise	Operates in 150 dB acoustic noise environments
Humidity	Up to 100% relative humidity; equipped with standard Schrader and pressure relief valves to provide positive internal pressure with dry nitrogen

*(Design and product specifications subject to change without notice.)*



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

**Green** The materials used in the manufacture of this document and its components are compliant to the requirements of Directive 2002/95/EC.



This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC of the European Union regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

## PRODUCT WARRANTY AND RETURN INFORMATION

### **WARRANTY**

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship **for a period of one year** after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years:
  - Fiber optic products
  - TW3000 Series unshielded twisted pair (UTP) transmission products
  - CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models
- Three years:
  - Pelco-branded fixed camera models (CCC1390H Series, C10DN Series, C10CH Series, IP3701H Series, and IX Series)
  - EH1500 Series enclosures
  - Spectra® IV products (including Spectra IV IP)
  - Camclosure® Series (IS, ICS, IP) integrated camera systems
  - DX Series digital video recorders, DVR5100 Series digital video recorders, Digital Sentry® Series hardware products, DVX Series digital video recorders, and NVR300 Series network video recorders
  - Endura® Series distributed network-based video products
  - Genex® Series products (multiplexers, server, and keyboard)
  - PMCL200/300/400 Series LCD monitors
- Two years:
  - Standard varifocal, fixed focal, and motorized zoom lenses
  - DF5/DF8 Series fixed dome products
  - Legacy® Series integrated positioning systems
  - Spectra III™, Spectra Mini, Spectra Mini IP, Esprit®, ExSite®, and PS20 scanners, including when used in continuous motion applications.
  - Esprit Ti and TI2500 Series thermal imaging products
  - Esprit and WW5700 Series window wiper (excluding wiper blades).
  - CM6700/CM6800/CM9700 Series matrix
  - Digital Light Processing (DLP®) displays (except lamp and color wheel). The lamp and color wheel will be covered for a period of 90 days. The air filter is not covered under warranty.
  - Intelli-M® eIDC controllers
- One year:
  - Video cassette recorders (VCRs), except video heads. Video heads will be covered for a period of six months.
- Six months:
  - All pan and tilts, scanners, or preset lenses used in continuous motion applications (preset scan, tour, and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to a Pelco designated location. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental, or consequential damages (including loss of use, loss of profit, and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, sales order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product that does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

### **RETURNS**

To expedite parts returned for repair or credit, please call Pelco at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair) and designated return location.

All merchandise returned for credit may be subject to a 20 percent restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid.

12-23-08

### **REVISION HISTORY**

<b>Manual #</b>	<b>Date</b>	<b>Comments</b>
C1420M	1/95	Original version.
C1420M-A	4/95	Rev. A. Incorporates changes in Section 4.0 and Figure 1 for unit weights and dimensions and maximum camera/lens dimensions per ECO #95-042.
C1420M-B	5/96	Rev. B. Incorporates changes in heater blankets and brackets per ECO #96-147. Part references updated accordingly and Figure 3 redone. Pressure switch information added per ECO # 95-220.
C1420M-C	5/96 7/97 6/98 11/98	Rev. C. Figure 3 reused to remove pressure sensor switch. Refer to manual C1445M for switch wiring. Figure 5 and Section 8.2 revised to include grounding lug. Section 7.3, step 4 revised (color: pink to blue). Added new Section 3.2 for CE and UL compliance. Removed references to UL compliance. Changed format. Revised Figure 4. Editing changes.
C1420M-D	7/00	Revised manual to include grounding stud on rear plate. Revised mating connector assembly instructions and diagram. Moved exploded assembly diagram and parts lists to new maintenance/service manual (C1420SM). Removed installation instructions for sun shroud, which has separate manual. Updated manual to new format.
C1420M-E	1/04	Revised enclosure pressure from 5 psi to 8 psi.
C1420M-F	12/04	Factory preset for regulator changed to 12 psi per ECO# 04-9807. Updated layout.
C1420M-G	12/04	Revised instructions and artwork for mating connector assembly per ECO #04-10254.
C1420M-H	1/07	Revised <i>Specifications</i> section for power consumption, maximum cable distances, and enclosure mounting.
C1420M-I	6/09	Removed the mating connector assembly instructions, moved the recharging enclosure instructions, reorganized the installation section, and added a parts list and accessories list. Also revised the specifications for input voltage, heaters, and weight.



[www.pelco.com](http://www.pelco.com)

Pelco, Inc. Worldwide Headquarters 3500 Pelco Way Clovis, California 93612 USA  
USA & Canada Tel (800) 289-9100 Fax (800) 289-9150  
International Tel +1 (559) 292-1981 Fax +1 (559) 348-1120